

New Species of *Elaphoglossum* Schott ex J.Sm. (Dryopteridaceae) from Brazil

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ABSTRACT.—Two new species of *Elaphoglossum* (Dryopteridaceae) are described and illustrated: *Elaphoglossum bradeanum* Melo & Salino and *Elaphoglossum commissurale* Melo & Salino, both endemic to Minas Gerais state (Brazil).

KEY WORDS.—Taxonomy, ferns, *Elaphoglossum*, Dryopteridaceae, Minas Gerais, Brazil

Elaphoglossum is a large fern genus with over 600 species, with about three-fourths of them occurring in tropical America (Mickel and Smith, 2004). There are approximately 84 species in Brazil. Most are limited to rain and mountainous forests in the southeastern and southern regions of Brazil. However, they can be found in several formations, such as semi-deciduous and deciduous forests and in savanna areas like the Brazilian Cerrado. The genus is difficult taxonomically, mainly due to morphological variation of vegetative characters. This fact, combined with the lack of recent studies in Brazil, has led to misinterpretation of the circumscription of many species. In this paper two new species are described as a partial result of a taxonomic study of *Elaphoglossum* from Minas Gerais state.

Elaphoglossum bradeanum Melo & Salino, *sp. nov.* TYPE.—BRAZIL. **Minas Gerais:** Santa Maria do Salto, Distrito de Talismã, Fazenda Duas Barras, 16° 24' 16" S, 40° 03' 27" W, 750–850m, 10 Oct 2003, A. Salino 9248 *et al.* (holotype, BHCB; isotype, NY). **Fig. 1A–C**

Elaphoglossum bradeanum *E. iguapensi* Brade affine, sed squamis rhizomatis margine integra et frondibus apice basique cuneatis differt.

Plants epiphytic and terrestrial; *rhizome* short creeping, 10 mm in diameter, densely scaly, scales oblong-lanceolate with acuminate and crispate apices, entire, blackish-brown, opaque, 3–5 × 1.4–7 mm; *phyllopodia* 16–27 mm long; *sterile leaves* 2.5–3.5 mm apart, 60–107 cm long; *petioles* 29–45 cm × 2–3.4 mm, sulcate, castaneous, with scales at the base oblong-lanceolate, 3–5 × 1.8–2.1 mm, appressed, ascending, sparsely ciliate, light brown, other scales elliptical, ciliate; *blades* oblong-linear, subchartaceous, apically and basally cuneate, the margins glabrous, 38–62 × 6–8 cm; *veins* obscure, free, simple and furcate, ca. 1 mm apart, set at 90° to costae, *hydathodes* lacking; blades on abaxial surface with minute, brown, stellate scales; costae sulcate until ½ the sterile leaf length, with scales oblong-lanceolate, 1–1.2 mm long, light

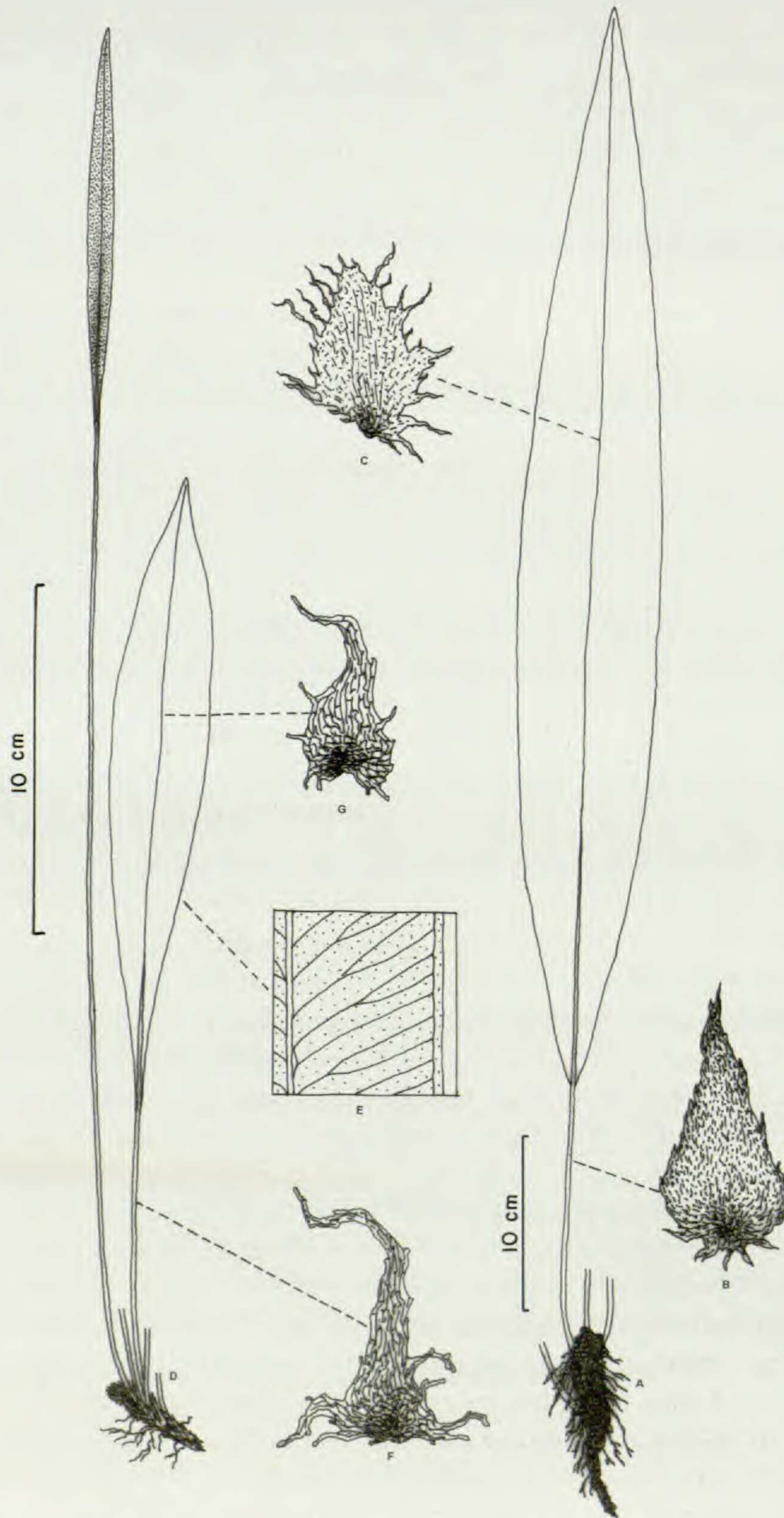


FIG. 1. A–C. *Elaphoglossum bradeanum* (Salino 9248, BHCB). A. Habit. B. Scales of petiole. C. Scales of abaxial surface of costa. D–G. *Elaphoglossum commissurale* (Salino 9496, BHCB). D. Habit. E. Venation showing the commissural vein parallel to the margin. F. Scales of petiole. G. Scales of abaxial surface of costa.

castaneous, margins erose and long ciliate, sometimes amorphous; *fertile leaves* unknown.

ADDITIONAL SPECIMENS EXAMINED.—BRAZIL. **Minas Gerais:** Santa Maria do Salto, Distrito de Talismã, Fazenda Duas Barras, 16° 24' 16" S, 40° 03' 27" W, 09 Mar 2004, A. Salino 9520 *et al.* (BHCB); idem, 24 Feb 2005, A. Salino 10063 *et al.* (BHCB).

Elaphoglossum bradeanum is most closely related to *E. iguapense* Brade (Brazil), but it is distinguished by the blackish-brown rhizome scales with entire margins (vs. castaneous scales with ciliate margins), sterile leaves ca. 100 cm long, and blade oblong-lanceolate with base and apex cuneate. *Elaphoglossum iguapense* has short sterile leaves (ca. 50 cm long), and blade lanceolate with base long decurrent and acuminate apex. *Elaphoglossum bradeanum* is endemic to Minas Gerais state near the border with the Bahia state. It is known only from the type locality, where it grows in the Atlantic rainforest at 750–850 m. We named this species in honor of Alexander Curt Brade, a botanist who contributed to the knowledge of this genus in Brazil in the last century.

Elaphoglossum commissurale Melo & Salino, *sp. nov.* TYPE.—BRAZIL. **Minas Gerais:** Santa Maria do Salto, Distrito de Talismã, Fazenda Duas Barras, 16° 23' 54" S, 40° 3' 39" W, 725m, 08 Mar 2004, A. Salino 9496 *et al.* (holotype: BHCB). **Fig. 1D–G**

Elaphoglossum pteropo C. Chr. et *E. ovalifolio* (Fée) Christ affine, sed frondibus sterilibus nervo commissurali praeditis differt.

Plants terrestrial; *rhizome* creeping, 1.7–1.8 mm in diameter, densely scaly, scales lanceolate with acuminate and crispate apex, entire to ciliate at the base, light brown, 1.7–2.7 × 0.6–0.7 mm; *phyllopodia* 4–6 mm long; *sterile leaves* 3–3.7 mm apart, 10–20 cm long; *petioles* 2–4 cm × 0.6–0.75 mm, sulcate, yellowish, with scales lanceolate, 1.5–2.6 × 0.4–0.7 mm, ascending, entire to sparsely ciliate at the base, castaneous, point of attachment blackish; other scales stellate to amorphous; *blades* oblong-lanceolate, subchartaceous, base long cuneate (decurrent), apex acute to cuneate, margins glabrous, 8–16 × 0.9–2 cm; veins evident on abaxial surface, simple and furcate, ca. 1.5 mm apart, uniting to a marginal commissural vein, set at 50–55° to costae; *hydathodes* lacking; costae abaxially and adaxially with scales irregularly divided to amorphous, 0.2–1 mm long, castaneous; *fertile leaves* one time as long as the sterile ones, 16.5–30 cm long; *petioles* 10–19 cm × 0.5–0.7 mm; *blades* linear, 5–10 × 0.8–1 cm, base long cuneate, decurrent, apex cuneate, margins glabrous; costae with scales similar in shape to those of the sterile leaves; *intersporangial scales* absent.

Elaphoglossum commissurale is characterized by the commissural vein of the sterile fronds, and by the scales of the rhizome with a collapsed rounded cells in the base and apex. This species is most related to *E. pteropus* C. Chr. and *E. ovalifolium* (Fée) Christ. It is distinguished from *E. ovalifolium* which

has an oblong-elliptic blade, and lanceolate and blackish scales on the petiole and costae, whereas *Elaphoglossum commissurale* has a oblong-lanceolate blade, and castaneous scales on the petiole and costa abaxially. It is distinguished from *E. pteropus* with its rhizome scales lanceolate with margins entire to sparsely ciliate and veins ending free at the margin of the blade, whereas in *Elaphoglossum commissurale* the rhizome scales are densely ciliate at the base, and the veins unite to a marginal commissural vein. This species is endemic to Minas Gerais state near the border with Bahia state. It is known only from the type locality, where it grows in the Atlantic rainforest at 700–800 m. *Elaphoglossum commissurale* is named for its commissural vein.

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